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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,616	11/29/2001	Ehud Pardo	MICR0250	7399
27792	7590	06/15/2006	EXAMINER	
RONALD M. ANDERSON MICROSOFT CORPORATION 600 108TH AVENUE N.E., SUITE 507 BELLEVUE, WA 98004			CHOI, PETER H	
			ART UNIT	PAPER NUMBER
			3623	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/997,616	<b>Applicant(s)</b> PARDO ET AL.	
	<b>Examiner</b> Peter Choi	<b>Art Unit</b> 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 14-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The following is a first office action upon examination of application number 09/997,616. Applicant elected claims 1-13 with traverse. Claims 14-47 have been withdrawn as directed towards non-elected claims. Claims 1-13 are pending in the application and have been examined on the merits discussed below.
2. Applicant's election with traverse of scheduling appointments for a job in the reply filed on March 31, 2006 is acknowledged. The traversal is on the ground(s) that the Examiner had failed to establish that sub-combination I and II are distinct. Applicant also argues that sub-combination I and II are not separately usable and that due to the similar classification of the two groups. This is not found persuasive because:

Sub-combination I (claims 1-13) is directed towards scheduling appointments to do a job, which encompasses scheduling a job during a time with sufficient amount of available time and resources. The scheduling is dependent on a desired starting time, which automatically revises the potential time periods during which the job might be scheduled. Jobs may be divided into a plurality of split time intervals so that they may be scheduled and serviced sequentially or in parallel, and further take into consideration the time availability of resources needed to perform each service needed to perform the job. Resources are prioritized in order to schedule appointments.

Sub-combination II (claims 14-47) are directed towards scheduling a plurality of jobs, which encompasses determining the availability (and unavailability) of resources and services required to perform each scheduled job. Time blocks are ranked in order to rank the priority of resource usage. Sub-combination II is also directed towards schedule management, specifically, adding, inserting and deleting jobs and appointments.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As per claim 1, the claimed invention "automatically":

- creates a plurality of proposals
- selects one of the plurality of proposals
- revises the plurality of proposals

It is unclear who or what is performing these steps and how these steps are “automatically” performed. Is the operator (from limitations (a) and (b) of claim 1) responsible for these steps? Does a computer, computer logic or computer software perform and automate these steps? Are the decisions arbitrarily made without method or reason?

Claims 2-13 are dependent on claim 1; therefore those claims are also rejected under the same rationale.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the method as claimed is merely enabled to specify services and time dependencies of services and resources needed to perform a job; however the

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system does not actually positively recite these steps. For the purposes of examination, the examiner assumes the applicant will amend the claim to recite that the method actually specifies services and time dependencies of services and resources needed to perform a job.

Claims 2-13 are dependent on claim 1; therefore those claims are also rejected under the same rationale.

Similarly, regarding claim 12, the method as claimed is merely enabled to schedule appointments for additional jobs; however the system does not actually positively recite these steps. For the purposes of examination, the examiner assumes the applicant will amend the claim to recite that the method actually schedules appointments for additional jobs.

The term "substantially" in claim 11 is a relative term that renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

### ***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 6 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Under the statutory requirement of 35 U.S.C. § 101, a claimed invention must produce a useful, concrete, and tangible result. For a claim to be useful, it must yield a result that is specific, substantial, and credible (MPEP § 2107). A concrete result is one that is substantially repeatable, i.e., it produces substantially the same result over and over again (*In re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000)). In order to be tangible, a claimed invention must set forth a practical application that generates a real-world result, i.e., the claim must be more than a mere abstraction (*Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77).

Regarding a concrete result, the claimed invention does not yield a result that is substantially repeatable, i.e., a result that produces substantially the same result over and over again. Claim 6 of the claimed invention cites the step of assigning different priorities to some of the resources. However, no means or criterion for establishing the priority of said resources are provided. For example, what makes Resource A more valuable (i.e., having higher priority) than Resources B or C? For this reason, the claimed invention lacks concreteness since the practice of the invention is solely dependent on subjectivity of a human user, which varies from person to person. In other

words, the outcome of the practice of the claimed invention is not substantially repeatable since the claimed invention is dependent on factors that could yield a significantly altered result every time the invention is repeated.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 3, 5 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Wetzer et al. (PGPub 2004/0162811).

As per claim 1, Wetzer et al. teaches a method for scheduling appointments to do a job, comprising the steps of:

(a) enabling an operator to specify each service and a time dependency of each service needed to perform the job **(establish a maintenance task database comprising a description of maintenance tasks to be performed within a specified time window for the end item based on the configuration; determining the resource requirements for each maintenance task in the maintenance task**



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**database. These resource requirements include at least one of labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task) [Paragraphs 21, 23];**

(b) enabling an operator to specify a time availability of each resource that can be used to perform each service needed to perform the job **(determining the resource requirements for each maintenance task in the maintenance task database. These resource requirements include at least one of labor, materials, tools, facilities, end item location, task precedence with respect to other tasks, and time span for the task. These resource requirements may be defined by the component manufacturers or determined by past practice, or determined by other known means. The labor requirements include not only the hours of labor required but as well as the skill specialty required and any necessary certification of the technician required to perform the maintenance task) [Paragraph 23];**

(c) automatically creating a plurality of proposals that specify when the job might be scheduled during a defined time period, as a function of each service and the time dependency of each service specified and as a function of the time availability of each resource that can be used to perform each service needed to perform the job **(the system can have a complete picture of all the resources required for those tasks, the resources that are available to perform those tasks, the cost for those tasks as well as all of the constraint and other rules imposed by the business organization and then develop a plan and optimize that plan dynamically and on a regular basis), each proposal indicating a time instance at which the job can be**

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initiated during the defined time period **(the system may then provide the user with the option to select which time window during which to perform the first task {suggesting that multiple acceptable time windows have been identified})**

[Paragraphs 33, 35];

(d) based upon a desired time for starting the job, selecting one of the plurality of proposals that was created, to make an appointment for doing the job **(the system may then provide the user with the option to select which time window during which to perform the first task)** [Paragraph 33]; and

(e) automatically revising the plurality of proposals in response to said one of the plurality of proposals being selected, to accommodate changes in the time availability of resources that are required to perform said one of the plurality of proposals that was selected, in regard to proposals that have not yet been selected **(After the preliminary resource plan is developed, the next step 26 is to optimize that resource plan. The optimization may come up with alternatives that require human intervention to select specific options that are desired, which will then cause the optimizer to reiterate back to the resource planning tools to re-execute the schedules)** [Paragraph 31].

It was known at the time of the invention that merely providing an automated way to replace a well-known activity which accomplishes the same result is not sufficient to distinguish over the prior art. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958).

Furthermore, it is well settled that it is not "invention" to broadly provide a mechanical or automatic means to replace manual activity that has accomplished the same result (i.e., "automatically" perform a plurality of actions). In re Venner, 120 USPQ 192.

As per claim 3, Wetzer et al. teaches the method of claim 1, wherein the step of automatically creating the plurality of proposals comprises the steps of automatically searching each of the services needed to perform the job to identify an availability of each block of time that is:

(a) sufficient in duration to perform the service **(the time span required for each maintenance task may relate to the task precedence with respect to other tasks and may relate to the sequence in which tasks are performed {i.e., is there enough time to perform each maintenance task in the time span})** [Paragraph 26]; and

(b) for which resources required to perform the service are available **(determine the resource available for a specified time window)** [Paragraph 27].

As per claim 5, Wetzer et al. teaches the method of claim 3, further comprising the step of splitting a block of time into pieces, to define a proposal having a split time interval in which the job can be performed **(Of a first task requires the completion of a second task before performing the first task, the system may identify several**

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**time windows within which the second task has already been planned)** [Paragraph 33].

As per claim 8, Wetzner et al. teaches the method of claim 1, wherein the step of selecting one of the plurality of proposals comprises the step of balancing usage of the resources that can be used to perform the services needed to perform the job **(the availability of the end item during a specific time window is a planning constraint that must be balanced between the operational demands the assets and the need for the maintenance activity)** [Paragraph 27].

As per claim 9, Wetzner et al. teaches the method of claim 1, wherein the a plurality of the services needed to perform the job are carried out sequentially, with a first service being completed before a second service can be begun **(the time span required for each maintenance task will relate to the task precedence with respect to other tasks and this includes the relationship between waiting for the completion of one task before being able to start a second task)** [Paragraph 26].

As per claim 10, Wetzner et al. teaches the method of claim 1, wherein a plurality of the services needed to perform the job are carried out in parallel, with a first service being completed while a second service is also being done **(the time span required for each maintenance task will relate to the task precedence with respect to other**

**tasks and this includes whether the tasks may be completed concurrently)**

[Paragraph 26].

As per claim 11, Wetzner et al. does not explicitly teach the method of claim 1, wherein the step of automatically creating the plurality of proposals is completed substantially before the step of automatically selecting is carried out.

However, it is inherent that a plurality of possible scheduling options must be identified before one of said options of automatically selected; therefore, the limitation is taught.

As per claim 12, Wetzner et al. teaches the method of claim 1, further comprising the step of repeating steps (a) through (b) for each of a plurality of additional jobs, to enable scheduling of appointments to the additional jobs **(identifying newly discovered maintenance tasks required to be performed within the specified time window, updating the resource plan and creating additional allocation transactions; identifying newly discovered maintenance tasks required to be performed within the specified time window, determining the additional resources required for the newly discovered maintenance tasks, updating the optimization of the resource deployment incorporating the additional resources required, and creating additional allocation transactions)** [Claims 6, 13].

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzer et al.

As per claim 2, although Wetzer et al. does not explicitly teach the method of claim 1, further comprising the step of associating the proposal with a customer for whom the job is to be done.

However, Official Notice is taken that it is old and well known in the art to associate appointments by customer. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of associating proposals with customers, because the resulting combination would enable the service provider to provide personalized service to the scheduled customer, rely upon previous historical experiences with said customer to become familiarized with required work during the scheduled appointment, and provide contact and billing information for services rendered to said customer.

As per claim 4, Wetzer et al. does not explicitly teach the method of claim 3, further comprising the step of associating a job identification with each block of time that is thus identified.

However, Official Notice is taken that it is old and well known in the art to associate blocks of time with the job scheduled to be performed during said block of time. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of associating blocks of time with scheduled jobs, because the resulting combination enables service providers to account for scheduled work and avoid overbooking of resources (for example, assigning a machine to perform two jobs at once, or assigning an employee to service multiple widgets at the same time, or to schedule an employee while they are unavailable).

As per claim 6, Wetzer et al. does not explicitly teach the method of claim 1, further comprising the step of assigning different priorities to at least some of the resources, so that a resource assigned a lower priority is used prior to a resource assigned a higher priority, when selecting said one of the plurality of proposals to schedule the appointment.

However, Official Notice is taken that it is old and well known in the art to assign different priorities to resources. Official Notice is also taken that it is old and well known in the art to conserve valuable and scarce resources by substituting less valuable and more plentiful resources. It would have been obvious to one of ordinary skill in the art to modify the teachings of Wetzer et al. to include the step of assigning different priorities to resources, because the resulting combination would enable that said resources are managed effectively to meet the demands of different users with different priorities by avoiding monopolization of resources and resource starvation while conserving scarce and valuable/important resources (higher priority resources) by substituting less valuable and more plentiful resources (lower priority resources) for earlier consumption.

12. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzer et al. as applied to claim 1 above, and further in view of Crici et al. (PGPub 2005/0027580).

As per claim 7, although not explicitly taught by Wetzer et al., Crici et al. teaches the method of claim 1, wherein the step of specifying the time availability of each resource includes the step specifying any block of time in which a resource is unavailable to perform a service during the defined time period **(The physician can block out periods of time for which no appointments can be scheduled; The system provides the service provider with the ability to continually modify the appointment schedule in order to block out additional slots of time or to make**



**time slots available; The service providers can change the appointment schedules in any way desired, for example, to block out days or sections of time when they are not available) [Paragraphs 7, 16].**

Both Wetzer et al. and Crici et al. are directed towards scheduling services; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of specifying blocks of time in which resources are unavailable because the resulting combination would enable users to assess the best time to be serviced by identifying time blocks in which resources are available.

As per claim 13, although not explicitly taught by Wetzer et al., Crici et al. teaches the method of claim 1, further comprising the step of enabling an appointment to be canceled, and in response thereto, automatically revising the plurality of proposals, to accommodate changes in the time availability of resources that were previously required to perform said one of the plurality of proposals corresponding to the appointment that was canceled, making the resources available for other appointments **(allow a potential service receiver to indicate a preference for a time slot which is already reserved and, if that time slot subsequently becomes available prior to the appointment, for example, due to a cancellation, the second service receiver is notified) [Paragraph 12].**

Both Wetzer et al. and Crici et al. are directed towards scheduling services; therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Wetzer et al. to include the step of enabling appointment cancellation because the resulting combination would make the corresponding time blocks available for scheduled service by prospective customers.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brown et al. (U.S Patent #5,671,361) teaches a Priority Rule Search Technique heuristic computer controlled algorithm for resource constrained project scheduling.

Noemi Paz and William Leigh discussed job shop scheduling in the International Journal of Operations & Production Management in 1994 (reference 1-U).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Choi whose telephone number is (571) 272 6971. The examiner can normally be reached on M-F 8-5.

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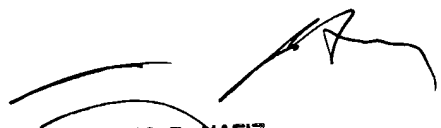
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Peter Choi  
Examiner  
Art Unit 3623

PC

June 10, 2006



TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 8000